



# What is Turner Syndrome?

Turner syndrome is a genetic condition that occurs in females of all racial and ethnic backgrounds. It mainly affects growth and fertility, but can also cause other health problems. The condition occurs in about 1 in 2,500 female births.

## Michigan Resources & Support

### Turner Syndrome Society

- Southeastern Michigan Chapter
- West Michigan Chapter

[www.turner-syndrome-us.org](http://www.turner-syndrome-us.org)

Click on "find a local chapter"

### Children's Special Health Care Services

Family Phone Line

Toll-free: 1-800-359-3722

E-mail: [ppp@michigan.gov](mailto:ppp@michigan.gov)

[www.michigan.gov/cshcs](http://www.michigan.gov/cshcs)

### Early On<sup>®</sup> Michigan

Toll-free: 1-800-EARLY ON

[www.1800earlyon.org](http://www.1800earlyon.org)

### Michigan Birth Defects Program

Nurse Follow-up Coordinator

Toll-free: 1-866-852-1247

E-mail: [BDRfollowup@michigan.gov](mailto:BDRfollowup@michigan.gov)

### Michigan Genetics Connection

[www.migeneticsconnection.org](http://www.migeneticsconnection.org)

## National Resources & Support

### Turner Syndrome Society of the United States

Toll-free: 1-800-365-9944

[www.turner-syndrome-us.org](http://www.turner-syndrome-us.org)

### Family Village

[www.familyvillage.wisc.edu](http://www.familyvillage.wisc.edu)

### Genetics Home Reference

[www.ghr.nlm.nih.gov/condition=turnersyndrome](http://www.ghr.nlm.nih.gov/condition=turnersyndrome)

### KidsHealth.org

[www.kidshealth.org/parent/medical/genetic/turner.html](http://www.kidshealth.org/parent/medical/genetic/turner.html)

### National Institute of Child Health and Human Development

<http://turners.nichd.nih.gov/>

### The MAGIC Foundation

Phone: 708-383-0808

Toll-free Parent Line: 1-800-362-4423

[www.magicfoundation.org/www/docs/115/turner\\_syndrome.html](http://www.magicfoundation.org/www/docs/115/turner_syndrome.html)

## How may Turner syndrome affect my child?

**Learning:** In general, girls with Turner syndrome have normal intelligence. They may have learning differences that make verbal learning easier than subjects like math. Some girls have difficulty with visual-spatial skills such as reading maps. Memory and motor coordination may also be affected.

**Behavior:** Attention Deficit Hyperactivity Disorder (ADHD) sometimes affects behavior in childhood. As girls with Turner syndrome grow up, they may also have concerns with body image and self-esteem.

**Physical:** One of the most common features is short stature. Girls may also

have other physical features such as lower set ears, droopy eyelids, a low hairline at the back of the neck, a webbed neck and puffy hands/feet.

**Medical:** Heart defects, kidney problems, and high blood pressure are common. Vision or hearing may be affected. There is a higher chance of diabetes as well as thyroid disorders. Most girls will not begin puberty or have menstrual periods without hormone therapy. Because the ovaries do not develop normally, women with Turner syndrome usually have infertility. Skeletal problems, such as curvature of the spine (scoliosis) and weak bones (osteoporosis) may occur later in life.

## How does Turner syndrome occur?

Turner syndrome is caused by a missing "X" chromosome. Usually females have two X chromosomes in all of the body's cells. Girls with Turner syndrome are missing all or part of one X chromosome. A girl with Turner syndrome is usually the first and only family member affected. Genetic counseling is recommended for parents to learn more about Turner syndrome in their family.

## How is Turner syndrome treated?

Turner syndrome cannot be cured, but many symptoms can be treated. All girls with Turner syndrome should be checked for heart and kidney defects. Infants and toddlers (birth to 3 years) should be connected with *Early On*<sup>®</sup> Michigan if there are concerns about learning, speech, or behavior; while children over 3 years of age should be referred for special education services if concerns arise. Growth hormone therapy beginning in childhood can help to increase final height as an adult. Estrogen hormone therapy will assist with the onset and progression of normal puberty. Other therapies or treatments may be needed for problems as they arise. Assisted reproductive techniques may allow some women to become pregnant. Girls with Turner syndrome and their families benefit from having a primary care physician who helps to coordinate their care with medical specialists and other community-based service providers.

For more information, call Michigan's Genetics & Birth Defects Program toll-free at 1-866-852-1247 or e-mail [Genetics@michigan.gov](mailto:Genetics@michigan.gov)

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